

REMARKS

In the Final Office Action, the Examiner rejected claims 1-25 and 28-40 and indicated that claims 26 and 27 contain allowable subject matter. By the present Supplemental Response, claims 1, 8, 15, 20, 25, 27, 31, 39, and 40 are amended to include subject matter indicated by the Examiner as being allowable, claims 2, 3, 9, 10, 16, 17, 21, 22, 26, 37 and 38 are canceled, and claims 41-43 are added. Upon entry of these amendments, claims 1, 4-8, 11-15, 18-20, 23-25, 27-36, and 39-43 are pending and believed to be in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested in view of the following remarks.

Allowable Subject Matter

In the Final Office Action, the Examiner objected to claims 26 and 27 as being dependent upon rejected base claims, but stated that these claims would be allowable if rewritten into independent form to include all of the limitations of their respective base claims and any intervening claims. *See* Final Office Action, page 8. Applicants would like to thank the Examiner for indicating the potential allowability of claims 26 and 27. As discussed below, dependent claim 26 has been incorporated into its base independent claim 25, and dependent claim 27 has been rewritten into independent form to include all the recitations of the previously presented independent claim 25.

Advisory Action

Applicants respectfully note that dependent claims 3, 10, 17, and 22, which generally recite the generation of an image by fusing a set of image data representative of structure with at least one of a set of image data representative of motion or of electrical activity, were rejected in the Final Office Action under Section 103 as being obvious in view of the Yuan reference in combination with at least one of the Felblinger, Stuber, and Manke references. *See* Final Office Action, page 4-5. In the Response filed on September 20, 2010, Applicants discussed the deficiencies of these cited references in detail with regard to the subject matter of claims 3, 10, 17, and 22. *See, generally*, Response filed

9/20/2010, pages 23-28. Subsequently, it appears that the Examiner found Applicants' remarks regarding claims 3, 10, 17, and 22 persuasive, as the Examiner conceded in the Advisory Action that the subject matter of claims 3, 10, 17, and 22 were not found in the cited art (and that only a double-patenting rejection against these claims remained outstanding). *See* Advisory Action, page 2. Applicants thank the Examiner for indicating the potential allowability of claims 3, 10, 17, and 22. Further, as discussed below, Applicants have chosen to incorporate of subject matter of claims 3, 10, 17, and 22 (along with any intervening claims) into their respective parent claims.

Interview Summary

In accordance with 37 C.F.R. §1.133 and M.P.E.P. §713.04, Applicants present the following summary of a telephonic interview conducted on November 17, 2010, between the Examiner, Ellsworth Weatherby, the Examiner's supervisor, Long Le, and Applicants' representatives, John M. Rariden and Kenneth Liu. Applicants graciously thank the Examiner for granting the after-final interview. During the interview, the parties discussed Applicants' and the Examiner's differing interpretations of the Stuber reference, which was cited in combination with the Yuan reference against several independent claims reciting the validation of motion data. The parties also discussed amending the present claims to include subject matter from one or more allowable dependent claims in order to expedite allowance of the present application.

First, with regard to the Stuber reference, the Examiner stated in the Final Office Action that Stuber teaches a validation step that entails "validating" EKG data using MR navigator data. As discussed during the interview, Applicants believe that the Stuber reference merely uses the EKG signal in combination with a pre-defined gating window to determine data acquisition times for the MR navigator data. For instance, as best understood from the Stuber reference, MR navigator data is acquired during "accepted profiles" that generally correspond to periods between QRS waves of the EKG signal and intervals in which a patient's breathing is near an end-expiratory state. Applicants do not

believe, however, that the foregoing process provides for the *validation* of EKG or navigator data in any way. The Examiner acknowledged that Applicants' intended definition of validating may entail more than simply identifying acceptable gating points, but insisted that the present language recited by the claims did not provide such a distinction. Accordingly, the parties were unable to reach an agreement regarding the interpretation of the Stuber reference.

The parties then discussed potential amendments that could be made in view of the allowable dependent claims to place the present application into condition for allowance. Specifically, the Examiner agreed that pending the filing of a terminal disclaimer to overcome any outstanding double-patenting rejections, incorporating the allowable dependent claims 3, 10, 17, and 22 (and any intervening claims) into their respective base independent claims 1, 8, 15, and 20 would place independent claims 1, 8, 15, and 20 in condition for allowance. The Examiner also acknowledged that incorporating allowable dependent claim 26 into base independent claim 25 and rewriting dependent claim 27 into independent form would place independent claims 25 and 27 into condition for allowance. Finally, with respect to the remaining independent claims (namely independent claims 31, 39, and 40), it was agreed by the parties that amending these claims to incorporate subject matter related to the fusing of image data (e.g., similar to the subject matter of dependent claims 3, 10, 17, and 22) would also place these independent claims into condition for allowance. Accordingly, Applicants have amended the pending claims in this suggested manner to place all claims in condition for allowance.

Claim Rejections under Doctrine of Obviousness-Type Double-Patenting

In the Final Office Action, the Examiner provisionally rejected claims 1-25 and 28-40 on the ground of nonstatutory obviousness-type double-patenting as being unpatentable over claims 1-32 of co-pending Application No. 10/723,894 and rejected claims 1-25 and 28-40 over claims 1-10 of U.S. Patent No. 7,756,565. *See* Final Office Action, page 3. Although Applicants do not necessarily agree that claims 1-25 and 28-40 are obvious over

claims 1-32 of co-pending Application No. 10/723,894 or claims 1-10 of U.S. Patent No. 7,756,565, Applicants hereby submit properly executed terminal disclaimers for each of the cited double-patenting references. Applicants respectfully submit that these terminal disclaimers obviate any outstanding double-patenting rejection against the presently pending claims.

Request Withdrawal of Rejections under Section 102 and 103 in view of Claim Amendments

The pending claims have been amended as suggested by the Examiner during the above-referenced interview, as discussed below. Specifically, the present amendments incorporate into each independent claim subject matter that has been acknowledged by the Examiner as *not* being found in the prior art, namely the subject matter of allowable dependent claims 3, 10, 17, 22, 26, or 27. Thus, it is believed that the foregoing amendments overcome all the previous rejections under Section 102 and 103 that were set forth in the Final Office Action.

Independent Claims 1, 8, 15, and 20

As noted above, dependent claims 3, 10, 17, and 22 were found to be allowable over the cited art, as indicated by the Examiner in the Advisory Action. By the present Response, the subject matter of claims 3, 10, 17, and 22 (which are now canceled) have been incorporated into their respective independent claims 1, 8, 15, and 20. For instance, independent claim 1 is amended to include the subject matter of allowable dependent claim 3 and intervening dependent claim 2 (now canceled), independent claim 8 is amended to include the subject matter of allowable dependent claim 10 and intervening dependent claim 9 (now canceled), independent claim 15 is amended to include the subject matter of allowable dependent claim 17 and intervening dependent claim 16 (now canceled), and independent claim 20 is amended to include the subject matter of allowable dependent claim 22 and intervening dependent claim 21 (now canceled). Accordingly, amended

independent claims 1, 8, 15, and 20 and their respective dependent claims are believed to be in condition for allowance.

Independent Claims 25 and 27 and New Dependent Claims 41-43

As noted above, dependent claims 26 and 27 were indicated by the Examiner as containing allowable subject matter. *See* Final Office Action, page 8. Applicants note that both of these claims depend directly from independent claim 25. Accordingly, Applicants have amended independent claim 25 to incorporate the subject matter of dependent claim 26, which is now canceled. Further, claim 27 has been rewritten into independent form to include all the recitations of the previously presented independent claim 25. In view of these amendments, Applicants respectfully request allowance of independent claims 25 and 27, as well as those claims depending therefrom.

Additionally, Applicants have added new dependent claims 41-43, which are identical to dependent claims 28-30, but depend from the newly drafted independent claim 27 rather than from independent claim 25. Thus, new dependent claims 41-43 do not contain any new subject matter and are believed to be allowable at least by virtue of dependency from independent claim 27.

Independent Claims 31, 39, and 40

As generally acknowledged by the Examiner during the above-referenced interview, remaining independent claims that did not have at least one allowable dependent claim could be placed into condition for allowance by incorporating the subject matter related to the fusing of image data, as generally recited by allowable dependent claims 3, 10, 17, and 22. As such, Applicants have amended each of independent claims 31, 39, and 40 to include subject matter that is substantially identical to the subject matter recited by allowable dependent claim 3. For instance, amended independent claim 31 recites, "...wherein the data processing circuitry is configured to ... generate a set of reconstructed data and generate an image from the set of reconstructed

data by fusing a set of image data representative of structure with at least one of a set of image data representative of motion or a set of image data representative of electrical activity.” (Emphasis added). Independent claim 39, as amended, similarly recites “wherein the data processing circuitry is further configured to ... reconstruct the set of image data to generate a set of reconstructed data, and generate an image from the set of reconstructed data by fusing a set of image data representative of structure with at least one of a set of image data representative of motion or a set of image data representative of electrical activity.” (Emphasis added). Further, independent claim 40, as amended, recites “wherein the data processing circuitry is configured to reconstruct the set of image data to generate a set of reconstructed data and generate an image from the set of reconstructed data by fusing a set of image data representative of structure with at least one of a set of image data representative of motion or a set of image data representative of electrical activity.” (Emphasis added). In view of these amendments, Applicants respectfully request allowance of independent claims 31, 39, and 40, as well as their respective dependent claims.

It is additionally noted that independent claim 40 is further amended to delete the fifth paragraph of independent claim 40, which recites “derived from a set of motion data describing the motion of at least one organ within the region of interest.” Applicants respectfully note that this particular paragraph of independent claim 40 was originally deleted in response to a Notification of Non-Compliant Amendment mailed on March 16, 2010 (*see* Response filed on April 7, 2010), and that Applicants inadvertently failed to remove this paragraph of claim 40 in the listing of claims submitted with the Response filed on September 20, 2010. Accordingly, Applicants respectfully request that this corrective amendment to independent claim 40 also be entered.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: November 23, 2010

/John Rariden/

John M. Rariden
Reg. No. 54,388
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545